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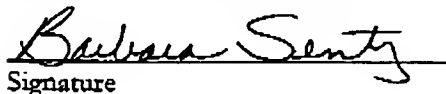
Title of Document Transmitted:	TRANSMITTAL SHEETS AND BRIEF OF APPELLANTS.
Applicant:	Matthias Eichstaedt et al.
Serial No.:	09/092,791
Filed:	June 5, 1998
Group Art Unit:	2141
Title:	CUSTOMIZABLE WEB FILLER FOR ALLEVIATION OF NETWORK LATENCY AND DELAY
Our Ref. No.:	AM998023 (ADM)

Please charge all fees to Deposit Account No. 09-0441 of IBM Corporation, the assignee of the present application.

By: 

Name: George H. Gates
Reg. No.: 33,500

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July 8, 2005
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G&C 30879.53-US-01

Due Date: July 10, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Matthias Eichstaedt et al. Examiner: Paul H. Kang
Serial No.: 09/092,791 Group Art Unit: 2141
Filed: June 5, 1998 Docket: AM998023 (ADM)
Title: CUSTOMIZABLE WEB FILLER FOR ALLEVIATION OF NETWORK LATENCY AND
DELAY

CERTIFICATE OF MAILING OR TRANSMISSION UNDER 37 CFR 1.8

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By: GHG

Name: George H. Gates

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

We are transmitting herewith the attached:

- ☒ Transmittal sheet, in duplicate, containing a Certificate of Mailing or Transmission under 37 CFR 1.8.
- ☒ Brief of Appellant(s).
- ☒ Charge the Fee for the Brief of Appellant(s) in the amount of \$500.00 to the Deposit Account.

Please consider this a **PETITION FOR EXTENSION OF TIME** for a sufficient number of months to enter these papers, if appropriate.

Please charge all fees to Deposit Account No. 09-0441 of IBM Corporation, the assignee of the present application. A duplicate of this paper is enclosed.

Customer Number 22462**GATES & COOPER LLP**

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Due Date: July 10, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Inventor: Matthias Eichstaedt et al.

Serial #: 09/092,791

Filed: June 5, 1998

Title: CUSTOMIZABLE WEB FILLER FOR
ALLEVIATION OF NETWORK
LATENCY AND DELAY

Examiner: Paul H. Kang

Group Art Unit: 2141

Appeal No.: _____

BRIEF OF APPELLANT'S

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In accordance with 37 CFR §41.37, Appellants' attorney hereby submits the Brief of Appellants on appeal from the final rejection in the above-identified application, as set forth in the Office Action dated February 10, 2005.

Please charge the amount of \$500 to cover the required fee for filing this Appeal Brief as set forth under 37 CFR §41.37(a)(2) and 37 CFR §41.20(b)(2) to Deposit Account No. 09-0441 of IBM Corporation, the assignee of the present application. Also, please charge any additional fees or credit any overpayments to Deposit Account No. 09-0441.

I. REAL PARTY IN INTEREST

The real party in interest is International Business Machines Corporation, the assignee of the present application.

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II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences for the above-referenced patent application.

III. STATUS OF CLAIMS

Claims 1, 15, 27 and 40-66 are pending in the application.

Claims 2-14, 16-26 and 28-39 have been canceled.

Claims 1-13 and 15-39 were rejected under 35 U.S.C. §102(e) as being anticipated by Klug et al., U.S. Patent No. 5,996,007 (Klug). However, claims 2-13, 16-26 and 28-39 have been canceled, and the Office Action specifically refers to claims 1, 15, 27 and 40-66 with regard to this rejection.

Claims 1-13 and 15-39 were rejected under 35 U.S.C. §103(a) as being unpatentable over Judson, U.S. Patent No. 5,572,643 (Judson), in view of Klug. However, claims 2-13, 16-26 and 28-39 have been canceled, and the Office Action specifically refers to claims 1, 15, 27 and 40-66 with regard to this rejection.

Claims 1, 15, 27 and 40-66 are being appealed.

IV. STATUS OF AMENDMENTS

No amendments to the claims have been made subsequent to the final Office Action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Briefly, Appellants' invention, as recited in independent claims 1, 15 and 27, is generally directed to an invention that alleviates problems associated with delays in accessing data on a network.

Independent claim 1 recites a method of alleviating problems associated with delays in accessing data on a network. The method includes the steps of accessing data on a network from a client computer, identifying when a sufficient delay occurs during the accessing step, and presenting filler contents on the client computer during the identified sufficient delay.

Independent claim 15 recites an apparatus for alleviating problems associated with delays in accessing data on a network. The apparatus is comprised of a client computer connected to the network, a browser, executed by the client computer, for accessing data on the network, and a filler

engine, executed by the client computer, for presenting filler contents on the client computer when a sufficient delay is identified in the accessing of the data on the network.

Independent claim 27 recites a computer program carrier readable by a computer and embodying one or more instructions that are executable by the computer to perform method steps for alleviating problems associated with delays in accessing data on a network. The method comprises the steps of accessing data on a network from a client computer, identifying when a sufficient delay occurs during the accessing step, and presenting filler contents on the client computer during the identified sufficient delay.

With regard to the claims, Appellants' attorney requests that the Board refer to the specification generally. Specific portions of the specification that directly relate to the claims on appeal include:

- (a) at page 3, line 1 through page 4, line 16;
- (b) at page 6, line 8 through page 7, line 11;
- (c) at page 8, line 6 through page 8, line 15, and in FIG. 1 as reference numbers 102, 104, 106, 108, 110, 112 and 114;
- (d) at page 9, line 16 through page 12, line 6, and in FIG. 1 as reference numbers 102, 104, 106, 108, 110, 112 and 114; and
- (e) at page 12, line 18 through page 16, line 14, and in FIG. 3 as reference numbers 300-316, in FIG. 4 as reference numbers 400-410 and in FIG. 5 as reference numbers 500-516.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 1, 15, 27 and 40-66 are anticipated under 35 U.S.C. §102(e) by U.S. Patent No. 5,996,007 (Klug).
2. Whether claims 1, 15, 27 and 40-66 are obvious under 35 U.S.C. §103(a) over U.S. Patent No. 5,572,643 (Judson), in view of U.S. Patent No. 5,996,007 (Klug).

VII. ARGUMENTS

A. The Office Action Rejections

In paragraph (4) of the Office Action, claims 1-13 and 15-39 were rejected under 35 U.S.C. §103(a) as being anticipated by Klug et al., U.S. Patent No. 5,996,007 (Klug). In paragraph (18) of

the Office Action, claims 1-13 and 15-39 were rejected under 35 U.S.C. §103(a) as being unpatentable over Judson, U.S. Patent No. 5,572,643 (Judson) in view of Klug. However, claims 2-13, 16-26 and 28-39 have been canceled, and the Office Action specifically refers to claims 1, 15, 27 and 40-66 with regard to these rejections.

Appellants' attorney respectfully traverses these rejections.

B. The Appellants' Independent Claims

Independent claims 1, 15, and 27 are generally directed to alleviating problems associated with delays in accessing data on a network. Claim 1 is representative, and comprises the steps of:

- (a) accessing data on a network from a client computer;
- (b) identifying when a sufficient delay occurs during the accessing step; and
- (c) presenting filler contents on the client computer during the identified sufficient delay.

C. The Klug Reference

Klug describes how selected content such as product information and announcements is provided during waiting time of an Internet session. In one implementation, the process implemented by the waiting time message program of the invention involves monitoring (416) a user node to identify a web site access request, accessing (418) a previously stored message set, selecting (432) a message from the message set and displaying or playing back (434) the selected message. The message set and particular messages may be selected based on user information (e.g., demographic, psychographic, or product preference information), information regarding the expected waiting time or other information. Messages are thereby provided during waiting time that would otherwise be essentially wasted from the perspective of an ordinary Internet user, e.g., during processing time associated with the exchange of information between Internet content providers and Internet content users.

D. The Judson Reference

Judson describes a method of browsing the Worldwide Web of the Internet using an HTML-compliant client supporting a graphical user interface and a browser. The method begins as a web page is being displayed on the graphical user interface, the web page having at least one link to a

hypertext document preferably located at a remote server. In response to the user clicking on the link, the link is activated by the browser to thereby request downloading of the hypertext document from the remote server to the graphical user interface of the client. While the client waits for a reply and/or as the hypertext document is being downloaded, the browser displays one or more different types of informational messages to the user. Such messages include, for example, advertisements, notices, messages, copyright information and the like.

E. Arguments directed to the first grounds for rejection: Whether claims 1, 15, 27, and 40-66 are anticipated under 35 U.S.C. §102(e) by U.S. Patent No. 5,996,007 (Klug).

1. Claims 1, 15 and 27

The Appellants' invention, as recited in independent claims 1, 15, and 27 is patentable over the references, because it contains limitations not taught by the references.

Specifically, the references do not teach or suggest the specific combination of limitations including "accessing data on a network from a client computer," "identifying when a sufficient delay occurs during the accessing step," and "presenting filler contents on the client computer during the identified sufficient delay."

The Office Action, however, asserts that these elements are all disclosed in Klug, as follows:

As to claims 1, 15 and 27, Klug discloses a method and apparatus for alleviating problems associated with delays in accessing data on network (See Klug, Summary of the Invention, col. 1, line 62 – col. 3, line 67), comprising the steps of:

- a) accessing data on a network from a client computer (Klug teaches loading web pages, see specifically col. 2, line 63 – col. 3, line 16);
- b) identifying when a sufficient delay occurs during the accessing step (Klug, col. 2, line 63 – col. 3, lines 40-59 and col. 7, line 34 – col. 8, line 39); and
- c) presenting filler contents on the client computer during the identified sufficient delay, wherein the filler contents are customized to a user's taste (Klug, col. 7, line 34 – col. 8, line 39 and col. 8, lines 40-53).

The Office Action also states the following:

Applicant's arguments filed September 16, 2004 have been fully considered but they are not persuasive.

The applicants argued in substance that the prior art of record failed to "teach or suggest the specific combination of limitations including 'accessing data on a network from a client computer,' 'identifying when a sufficient delay occurs during

the accessing step,' and 'presenting filler contents on the client computer during the identified sufficient delay.' See Remarks, page 7. Specifically, the applicants argued that "Klug does not identify when a sufficient delay occurs. Instead, Klug always displays a message whenever a site request is made by a user. The [portions of Klug relied upon by the examiner] merely state that the length of the waiting time messages are selected on the basis of the anticipated duration of the waiting time." Remarks, page 9.

The examiner respectfully disagrees with the applicants' interpretation of the prior art of record. As noted by the applicants, Klug teaches that the length of the waiting time messages are selected on the basis of the anticipated duration of the waiting time. Stated differently, Klug teaches first determining the duration of a delay, then if the duration is sufficient, displaying a message or messages corresponding to the duration for display to the user during this delay. See Klug, col 3, lines 52-59.

The applicants argue that the limitation of determining sufficient delay as claimed requires that not all site requests will result in displaying a message, and this limitation distinguishes the invention from the prior art. First, this interpretation of the limitation is not essential to the scope of the prior art. The definiteness of the language employed must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. Insofar, the claims have been given the broadest reasonable interpretation consisted with the specification and the prior art, since the applicant may then amend his claims, the thought being to reduce the possibility that after a patent is granted the claims may be interpreted as giving broader coverage than is justified.

First, the purpose of identifying a sufficient delay in the invention as suggested by the applicant is for determining whether a message should be displayed at all, and the purpose in Klug is for determining which message to display. However, the interpretation of "sufficient delay" as claimed does not require this distinction. The scope of the limitation "identifying when a sufficient delay occurs" encompasses both determining whether a message should be displayed and which message should be displayed. Accordingly, this distinction made by the applicants is not given patentable weight.

Second, assuming arguendo that the claims require whether a message should be displayed, the Klug reference would nevertheless anticipate the claimed invention. For instance, if the system of Klug contained only one message thirty (30) seconds in duration, and the identified duration is only ten (10) seconds in duration, then by default no message is displayed. Necessarily, the system as taught by Klug inherently determined whether said message should be displayed based on the duration of the message and the delay.

Appellants' attorney respectfully disagrees. At the indicated locations, Klug merely describes the following:

Klug: Col. 1, line 62 - Col. 3, line 67

The present invention is based, in part, on a recognition that the Internet as a medium is intrinsically different from traditional media in ways that demand new business approaches. In particular, conventional advertising techniques largely ignore the interactive basis of the Internet and are therefore subject to certain pitfalls and/or fail to take advantage of certain opportunities of the interactive environment. Examples of business factors peculiar to this interactive environment include the following:

- users who select to participate in the Internet medium tend to be interested in retaining control over their Internet sessions and, therefore, often ignore and even resent advertisements that are pushed onto their desktops and interrupt their sessions or intrude on their desktop areas;

- although attempts have been made, with some success, to convert the Internet medium to a push medium, content is not typically broadcast over the Internet, but rather, is usually pulled down or retrieved by identifiable users; and

- the interactive nature of Internet communications results in waiting times associated with data transmission where the user may be more readily engaged in a manner that is unobtrusive.

These and other factors of the interactive environment are an important basis of the present invention.

According to one aspect of the present invention, selected messages are provided at a user node during a waiting time of an Internet session. The messages can be, for example, promotional or advertising content, product information, a public service announcement or other messages of possible interest to the user. The associated process involves providing a selection of messages, monitoring a user node during an Internet session to identify a web site access request, selecting a message from the selection of messages and displaying the message at the user node during a waiting time related to the web site access request. The waiting time relates to a time interval during which the user node communicates with a server of the requested site and associated set up periods. Preferably, the waiting time during which messages are displayed fall within the time period beginning when the user selects a site and ending upon initiation of site display on the user's desktop. The selection of messages is preferably provided by storing the selection at the user node, e.g., on the user's hard drive or in cache, in a local area network of the user, or otherwise in storage accessible by the user without Internet communication. This selection is stored, for example, prior to an Internet session or as an explicit or background function of a browser service or searching engine during an Internet session. A selection may be stored only for use during a particular session or may be saved for use in subsequent sessions.

The web site access request can be identified in a variety of ways. For example, operating system messages may be monitored to identify a "mouse down" message having desktop coordinates corresponding to a hot link area of the desktop. Keyboard messages may be monitored to identify entry of a URL address or the like. Alternatively, protocol communications such as TCP/IP or HTTP communications of the browser may be monitored to identify a header message associated with a site

access request. Upon identifying such an access request, a message can be selected and played at the user node. The message may be selected automatically by logic implementing the process of the present invention, or the user may be allowed to select from message choices, e.g., displayed in a menu or graphically presented in the format of a room or gallery through which the user may peruse.

According to another aspect of the present invention, waiting time messages are terminated at the end of the waiting time so as to minimize Internet session intrusion. The associated process involves providing a waiting time message such as described above, monitoring communications relating to loading of a requested web site to identify a selected status relative to the loading, and terminating playback of the waiting time message based on the identified status. In one implementation, the monitored communications are protocol or other communications between a browser and a server of the selected web site. Alternatively, operation of the browser may be monitored to obtain an indication relating to loading status. As a further alternative, operating system messages may be monitored relative to web site display status. Playback of the waiting time messages can be terminated, for example, upon receiving an indication that a web site page is ready for preliminary, intermediate or complete display. In this regard, the user can preferably set the message program so that messages terminate when loading reaches a selected level, e.g., 25%, 50%, or 100% complete.

According to another aspect of the present invention, waiting time messages are selected based on user information. Preferably such user information is obtained by voluntary participation of the user. Credit towards free Internet access time or other value may be provided as an incentive to and reward for user participation. For example, the user may provide information relative to the demographics, psychographics, product interests and lifestyle of the user upon registering to participate in a waiting time message program. Such information may have already been made available by the user at a separate registration site. Alternatively, information regarding the user may be obtained based on a site access request, a history of Internet usage, or other information that may be derived by monitoring the user node. Additionally, stored user information may be continuously or periodically updated (information and messages may be added and/or deleted) based on a learning process implemented by intelligent code based on Internet usage patterns or the like. Such user information can be employed to tailor the selected waiting time messages to the user's likely interests, thereby enhancing user engagement and enjoyment as well as improving advertisement response rates.

According to yet another aspect of the present invention, waiting time messages are selected, at least in part, on the basis of the anticipated duration of the waiting time. It will be appreciated that the length of the waiting time will vary depending upon, inter alia, the speed of the web site server, the amount of information to be loaded, the congestion of the Internet and the associated configuration of the path from the web site to the user node, the nature and bandwidth of the legs of the communication path between the server and the user node, the communications network selected, the speed of the user node processor, and the operating parameters of the browser or other services involved in

server/user communications. Some or all of these factors may be taken into account in estimating waiting time. A waiting time message or messages are preferably selected based on anticipated waiting time to increase message effectiveness and user enjoyment. For example, a short message may be displayed or played where the waiting time is expected to be of short duration and a room or gallery of messages may be made available in the case of a longer waiting period.

The present invention thus provides advertising or other content in an unobtrusive manner. It is believed that such content will more readily engage and entertain users and, therefore, will be more effective. Moreover, such content will not interrupt or distract from Internet sessions, can be tailored to the user's interests, and may inure to the user's benefit and, therefore, should be more acceptable to users and Internet service providers.

Klug: Col. 7, line 34 – Col. 8, line 53

FIG. 4 is a flow chart illustrating operation of the waiting time message program. The program may be executed, for example, on the CPU of the user node and may be loaded (412) at log on or at the start of Internet session. As indicated in FIG. 4, user information may be obtained and stored (414) prior to or after loading of the program. As previously noted, the user information may be obtained from a separate web site or may be obtained by way of a questionnaire implemented by the program. The user information is preferably stored in computer memory at the user node (on the users computer, on another computer in the user's local area network, or otherwise stored for retrieval without accessing the Internet. Based on the user information, the program selects (413) a message set by employing algorithms for deriving demographic, psychographic, lifestyle or other information based on the user information and retrieves a corresponding message set. The message set is then compressed (415) for compact storage at the user node.

During an Internet session, the program monitors (416) the user node to identify a site access request. The site access request may be identified by reference to a header message of a protocol communication between the browser and the selected web site. Alternatively, the site access request may be identified by monitoring operating system messages or by identifying a URL entry via a keyboard. Upon identifying a site access request, the program accesses (418) the message set is stored, for example, on the user's hard drive or in cache. The program may select (432) a message from the message set based on user information, information regarding the expected duration of the waiting time, both, or neither. If user information is to be utilized (420) the program retrieves (422) a user profile. The user profile is preferably based on user information voluntarily entered by the user as described above. Alternatively, user information may be derived, for example, based on the selected web site, a history of selected web sites during the current Internet session and/or previous sessions or based on other information obtained by monitoring the user node. In addition, the program may identify (424) user participation parameters entered by the user as described above.

If time information is to be utilized (426) the program determines (428) the approximate waiting time associated with a particular web site access request. The

approximate waiting time depends on a number of factors including the speed of the server at the selected web site, the level of congestion on the Internet and any rerouting required by such congestion, the bandwidth of each leg of the route between the selected web site and the user node, the processing speed of the user node, the operation of the browser, and the size and number of files that are downloaded before display can begin. Ideally, as many of these factors as possible should be taken into account in determining the approximate waiting time. For example, the headers of protocol communications between the browser and the selected web site convey information regarding the quantity of information that is to be downloaded. Such data is commonly used to provide displays during loading such as "15% of 7K" or the like. This information can be used to gain some information regarding the approximate waiting time, although it will be appreciated that actual waiting time may be longer than expected as multiple files may be linked by tags, i.e., a message embedded in one file may direct the browser to access another file at the selected web site. The program can use such file size information together with information regarding the speed of the user node processor, the operation of the browser and empirical data gained through experience to approximate the waiting time and identify (430) messages to be displayed or played during the waiting time. Additionally, information regarding the expected waiting time and regarding the fastest communication network at the current time may be obtained by "pinging" one or more communications networks, e.g., issuing network access requests to the network(s) and measuring the response time for receiving a responsive signal.

The corresponding messages are then selected (432) by the program and displayed or played back (434). During the waiting time, the program monitors (436) messages to identify an indication that loading is complete or has reached a level selected by the user as a participation parameter. Such an indication may be provided, for example, by way of a message from the browser to the operating system to initiate the display or by monitoring the loading status. Upon identifying such a message, the program terminates (438) the waiting time messages and the user node proceeds to display (440) the web site information as usual. In this manner, the messages are provided only during the waiting time and do not delay or interfere with the user's Internet session.

Klug does not teach or suggest the specific sequence of events recited in Appellants' claims of "accessing data on a network from a client computer," and then "identifying when a sufficient delay occurs during the accessing step," before "presenting filler contents on the client computer during the identified sufficient delay." More specifically, Klug does not identify when a sufficient delay occurs.

Instead, Klug always displays a message whenever a site request is made by a user. The above portions of Klug merely state that the length of the waiting time messages are selected on the basis of the anticipated (i.e., estimated) duration of the waiting time.

Thus, the reference does not anticipate Appellants' invention. Moreover, the various elements of Appellants' claimed invention together provide operational advantages over the reference. In addition, Appellants' invention solves problems not recognized by the reference.

Appellants' attorney submits that independent claims 1, 15, and 27 are allowable over the reference. Further, dependent claims 40-66 are submitted to be allowable over the reference in the same manner, because they are dependent on independent claims 1, 15, and 27, respectively, and thus contain all the limitations of the independent claims.

In addition, at least some of the dependent claims 40-66 recite additional novel elements not shown by the reference, as set forth below.

In this regard, Appellants' attorney notes that the Office Action misstates some of the claim groupings. Nonetheless, Appellants' attorney groups the claims correctly and cites the appropriate rejection from the Office Action against each group.

2. Claims 40, 49 and 58

With regard to dependent claims 40, 49 and 58, which recite that the identifying step or identification of the sufficient delay is performed by a server computer connected to the client computer via the network, the Office Action asserts that these limitations are taught by Klug at col. 5, line 45 – col. 6, line 4. Appellants' attorney disagrees. At the indicated location, Klug merely describes downloading messages and logic from a server, but nowhere describes identifying the sufficient delay at the server computer.

3. Claims 41, 50 and 59

With regard to claims 41, 50 and 59, which recite that the sufficient delay is identified by the server computer and then communicated to the client computer to trigger the presenting of the filler contents on the client computer, the Office Action asserts that these limitations are taught by Klug at col. 2, line 63 – col. 3, line 59. Appellants' attorney disagrees. At the indicated location, Klug merely describes terminating playback of the message when a web page is ready for display.

4. Claims 42, 51 and 60

With regard to claims 42, 51 and 60, which recite that the filler contents are provided by the

server computer, these claims stand or fall with independent claims 1, 15 and 27.

5. Claims 43, 52 and 61

With regard to claims 43, 52 and 61, which recite that the filler contents are selected by the server computer, these claims stand or fall with independent claims 1, 15 and 27.

6. Claims 44, 53 and 62

With regard to claims 44, 53 and 62, which recite that the filler contents are directly related to the accessed data (in claims 44 and 53) and that the filler contents are directly related to the user's transaction or session (in claim 62), these claims stand or fall with independent claims 1, 15 and 27.

7. Claims 45, 54 and 63

With regard to claims 45, 54 and 63, which recite that the presenting of the filler contents do not interrupt the accessing of the data, the Office Action asserts that these limitations are taught by Klug at col. 5, line 45 – col. 6, line 21. Appellants' attorney disagrees. At the indicated location, Klug merely describes that the downloading of message sets occurs prior to web site selection and therefore user node resources remain available for use in loading selected web site information, but nowhere asserts that the presenting of the filler contents does not interrupt the accessing of the data.

8. Claims 46, 55 and 64

With regard to claims 46, 55 and 64, which recite that the filler contents are presented while the accessing of the data continues, these claims stand or fall with independent claims 1, 15 and 27.

9. Claims 47, 56 and 65

With regard to claims 47, 56 and 65, which recite that, if the presenting of the filler contents completes before the accessing of the data completes, new filler contents are presented, the Office Action asserts that these limitations are taught by Klug at col. 3, lines 40-59, col. 5, line 45 – col. 6, line 53 and col. 8, lines 6-52. Appellants' attorney disagrees. At the indicated locations, Klug merely describes selecting waiting time messages based on the anticipated duration of the waiting time, displaying or playing the messages, and the calculation of the waiting time, but nowhere asserts that

new filler contents are presented if the presenting of the filler contents completes before the accessing of the data completes.

10. Claims 48, 57 and 66

With regard to claims 48, 57 and 66, which recite that, if the accessing of the data completes before the presenting of the filler contents completes, the presenting of the filler contents is terminated, these claims stand or fall with independent claims 1, 15 and 27.

F. Arguments directed to the second grounds for rejection: Whether claims 1, 15, 27, and 40-66 are obvious under 35 U.S.C. §103(a) over U.S. Patent No. 5,572,643 (Judson), in view of U.S. Patent No. 5,996,007 (Klug).

1. Claims 1, 15 and 27

The Appellants' invention, as recited in independent claims 1, 15, and 27 is patentable over the references, because it contains limitations not taught by the references.

Specifically, the references do not teach or suggest the specific combination of limitations including "accessing data on a network from a client computer," "identifying when a sufficient delay occurs during the accessing step," and "presenting filler contents on the client computer during the identified sufficient delay."

The Office Action, however, asserts that these elements are all disclosed in Judson and Klug, as follows:

Judson discloses the invention substantially as claimed. Judson discloses a method and apparatus for alleviating problems associated with delays in accessing data on network (Judson, col. 1, line 13 - col. 2, line 53), comprising the steps of:

a) accessing data on a network from a client computer (a client connected to a server through a network [Judson, client/server network depicted in fig. 1] accesses web pages using web browsers [Judson, fig. 2, element 62]; Judson, col. 1, line 13 - col. 2, line 53);

b) presenting filler contents on the client computer [during the accessing step] (latency-filler contents, customized on user interest, are displayed during web page access; Judson, col. 5, line 50 - col. 6, line 24 and col. 7, lines 2-17).

However, Judson does not specifically disclose step b) identifying when a sufficient delay occurs during the accessing step. In the same field of endeavor, Klug teaches determining the wait time associated with a particular web site access request and presenting wait time messages based on the wait time (Klug, col. 2, line 63 - col.

3, line 16 and col. 7, line 34 - col. 8, line 39).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated the step of determining the wait time, as taught by Klug, into the filler data display system of Judson, for the purpose of enhancing acceptability of the system to end-users by increasing customization to user preferences and decreasing intrusion to the Internet session.

Appellants' attorney respectfully disagrees. The indicated locations in Klug are set forth above, while the indicated locations in Judson follow:

Judson: col. 1, line 13 - col. 2, line 53

The worldwide network of computers commonly known as the "Internet" has seen explosive growth in the last several years. Mainly, this growth has been fueled by the introduction and widespread use of so-called "web" browsers, which allow for simple graphical user interface (GUI)-based access to network servers, which support documents formatted as so-called "web pages". The "World Wide Web" (WWW) is that collection of servers of the Internet that utilize the Hypertext Transfer Protocol (HTTP). HTTP is a known application protocol that provides users access to files (which can be in different formats such as text, graphics, images, sound, video, etc.) using a standard page description language known as Hypertext Markup Language (HTML). HTML provides basic document formatting and allows the developer to specify "links" to other servers and files. Use of an HTML-compliant client browser involves specification of a link via a Uniform Resource Locator or "URL". Upon such specification, the client makes a tcp/ip request to the server identified in the link and receives a "web page" (namely, a document formatted according to HTML) in return.

There is a finite time period between the time the user initiates the link and the return of the web page. Even when the web page is returned quickly, there is an additional time period during which formatting information must be processed for display on the display interface. For example, most web browsers display in-line images (namely images next to text) using an X bit map (XBM) or .gif format. Each image takes time to process and slows down the initial display of the document. The user typically "sees" an essentially unrecognizable "image" on the display screen which only gradually comes into focus. It is only after the entire image is downloaded from the server and then processed by the browser that the user can fully access the web page itself. This "waiting" period is even longer when the client machine has a relatively slow modem, and often the user will have to wait many seconds before being able to see the in-line image and/or begin using the web page. This problem will be exacerbated when the next generation browser technology (such as Netscape Navigator 2.0) becomes more widely implemented because such browsers are being designed to handle much more complex download formats (for more interactive, dynamic displays).

BRIEF SUMMARY OF THE INVENTION

It is thus a primary object of the invention to enhance the operation of a web browser by causing the display of some useful information to the user during the period of user "downtime" that otherwise occurs between linking and downloading of a hypertext document identified by the link. Such information may include, without limitation, advertisements, messages, fill-in forms, notices from a service provider, notices from another Internet service (such as receipt of an e-mail message), or some third party notice.

It is another more particular object of the invention to use an Hypertext Markup Language comment (e.g., via an HTML comment tag) in a web page to store an information object related to a link and then formatting and displaying such information when the link is activated.

It is still another object of the invention to embed an information object within an existing web page so that the object is masked until a link to another web page is activated. Upon activation, the object is displayed to the user effectively as a "mini" web page while the browser calls the link and awaits for a reply and download.

For example, in one particular embodiment, the information object includes copyright management information for a hypertext document associated with a link in a currently-displayed page. Such information may include the name or other identifying information of a copyright owner, terms and conditions for uses of the work within the hypertext document, and such other information as may be prescribed or desired. When the user "hits" the link in the current page, the copyright management information (which is already present in the browser) is displayed as the new document is being accessed and downloaded. The copyright management information, for example, may inform the user of the terms and conditions of how the copyrighted content being downloaded can then be reused. The "time" period normally associated with the download is thus productive for both the user (since he or she no longer has to sit and wait for the display) as well as to the content provider.

According to the preferred embodiment, there is described a method of browsing the Worldwide Web of the Internet using an HTML-compliant client supporting a graphical user interface and a browser. The method begins as a web page is being displayed on the graphical user interface, the web page having at least one link to a hypertext document preferably located at a remote server. In response to the user clicking on the link, the link is activated by the browser to thereby request downloading of the hypertext document from the remote server to the graphical user interface of the client. While the client waits for a reply and/or as the hypertext document is being downloaded, the browser displays one or more different types of informational messages to the user. Such messages include, without limitation, advertisements, notices, messages, fill-in forms, copyright information and the like. Preferably, the message information is in some way related to the hypertext document being accessed and downloaded, as in the case of copyright management information perhaps warning the user that the material being downloaded is subject

to certain use restrictions of the copyright owner. Where the displayed information is related to the link, it is desirable that such information be embedded within the web page from which the link is launched. The information is preferably "hidden" within the web page using a hypertext markup comment tag.

Judson: col. 5, line 50 - col. 6, line 24

A preferred operation of the inventive method is illustrated in the flowchart of FIG. 3. The method begins at step 70 as a current web page is being displayed on the graphical user interface of the computer. It is assumed that this web page has embedded therein one or more comment tags, each of which (or perhaps several of which in combination) define an information object. Generally, although not required, each information object will be provided for one or more links in the web page being displayed. However, because the information object is embedded within a comment tag, it is hidden or "masked" and thus is ignored by the display routines of the browser. In step 72, the method saves or stores the information object in memory or some dedicated portion of the RAM (e.g., a cache) so that it may be easily and quickly obtained. At step 74, a test is made to determine whether a link associated with the information object has been activated. If so, the method continues at step 76 and issues a tcp/ip request to the network (assuming the link was to a URL). Step 78 represents the handshaking period during which the client waits for the appropriate response from the server. During this period, the client retrieves the information object (at step 80) and outputs the information (in step 82) to the user on the display. Steps 80 and 82 are shown in parallel to the handshaking and wait step 78 to emphasize the inventive concept of displaying useful information to the viewer during the link process. At step 84, a test is then performed to determine whether the download and refresh of the display is complete. If so, the routine saves the information object at step 86 and opens up access to the hypertext document at step 88.

FIG. 4 shows the browser navigation tool prior to download of the U.S. Patent and Trademark Office page (available at <http://www.uspto.gov>). FIG. 5 shows the web page as it exists on the display. This web page has various links including "Welcome to the United States Patent and Trademark Office." FIG. 6 shows the HTML source code used to generate the web page of FIG. 5, and FIG. 7 shows this source code modified to include an information object 75 within a comment tag. This object displays the message "The PTO Welcomes You" when the "Welcome to the United States Patent and Trademark Office" link is activated. FIG. 8 shows the effect of this information object when the routine of FIG. 3 is carried out.

Judson: col. 7, lines 2-17 (actually, col. 6, line 62 - col. 7, line 17)

It should also be appreciated that while in the preferred embodiment the information object is formatted and displayed upon activation of a link in a web page being currently displayed, this is not a limitation of the invention either. The information object need not be embedded within an existing web page, but rather may be embedded within the home page of the browser or supported elsewhere

within the client itself. Thus, the information object may be displayed whenever a call to a web page is made, such as when a search to a particular URL is initiated, or when a previously-stored URL is launched (e.g., from a "View Bookmark" pulldown menu). Moreover, the client may store random information objects in the form of information advertisements (which in turn may include .gif files to produce images) so that the browser may call any such information at random. The browser may even be programmed to select which of the plurality of information objects to display based on a comparison of the type of web pages accessed by the user. Thus, for example, if the user accesses web pages relating to a particular service, the browser may be programmed to identify this access history and select predetermined information objects that will be of interest to the user (given that history).

Judson: col. 7, line 34 - col. 8, line 39 (actually, col. 7, line 26-col. 8, line 49)

As noted above, the information object may be automatically or selectively queued to the client printer upon display. This would enable the viewer to generate merchandise coupons and the like related to the web page being accessed. Thus the web site provider could offer the viewer some added incentive for accessing its web page by causing the printing of a redeemable coupon or other information token (e.g., a discount card, a receipt, etc.). All of these actions are initiated during the otherwise downtime between web page access and download, thereby significantly increasing the value of the on-line informational content provided to the user.

As used herein, the "information object" or "information" output to the viewer during the link process should be broadly construed to cover any and all forms of messages, notices, text, graphics, sound, video, tables, diagrams, applets and other content, and combinations of any of the above.

One of the preferred implementations of the "browser" of the invention is as a set of instructions in a code module resident in the random access memory of the user's personal computer. Until required by the computer, the set of instructions may be stored in another computer memory, for example, in a hard disk drive, or in a removable memory such as an optical disk (for eventual use in a CD ROM) or floppy disk (for eventual use in a floppy disk drive). In addition, although the various methods described are conveniently implemented in a general purpose computer selectively activated or reconfigured by software, one of ordinary skill in the art would also recognize that such methods may be carried out in hardware, in firmware, or in more specialized apparatus constructed to perform the required method steps.

Finally, the present invention is designed to be implemented with conventional HTML and enhancements thereto (including HTML 2.0, HTML 3.0, HTML with third party-supplied extensions such as NHTML, and the like), by an HTML-compliant browser, such as Netscape, Netscape Navigator 2.0, Mosaic, MSN, as such existing or developed programs are modified to include the functionality of the invention described above. Netscape Navigator 2.0 has in-line support for platform-independent application objects (e.g., applets written in JavaScript, from Sun Microsystems). An applet resides on the server associated with a web page and is downloaded to the client browser after a link is established to the web page. The browser includes an engine for executing the downloaded applets.

With this type of browser, the invention caches or otherwise stores a downloaded applet and later uses it, preferably when a new, related link is established. Thus, an "information object" according to the invention may include an applet which, for example, may generate an animated figure or icon, some aural output, a scrolling display, or a combination thereof. One of ordinary skill, however, will recognize that the inventive features of the invention, including the masking of "mini" hypertext documents within a web page and display of such documents upon link activation, may be applied to other Internet services as well as to HTTP compliant browsers. Thus, the invention would be useful to provide information to a user during an FTP access, an on-line chat, a posting to a bulletin board, or even during the sending and retrieval of e-mail. All such variations are considered within the scope of the invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is set forth in the following claims.

1. A method of browsing in a computer network having at least one client connectable to one or more servers, the client having an interface for displaying a first hypertext document with at least one link to a second hypertext document located at a server, comprising the steps of;

contacting the server in response to activation of the link to initiate downloading of the second hypertext document from the server to the client; in response to activation of the link, retrieving an information object that has been stored in the client prior to the activation of the link; and

displaying the retrieved information object on the interface during at least a portion of a time period between the activation of the link and completion of the downloading of the second hypertext document from the server to the client to provide information to a user during a process of linking from the first hypertext document to the second hypertext document;

wherein the information object is stored within the first hypertext document and is not displayed on the interface until after activation of the link that initiates downloading of the second hypertext document from the server to the client.

The combination of Judson and Klug does not teach or suggest the specific sequence of events recited in Appellants' claims of "accessing data on a network from a client computer," and then "identifying when a sufficient delay occurs during the accessing step," before "presenting filler contents on the client computer during the identified sufficient delay." More specifically, the combination of Judson and Klug does not identify when a sufficient delay occurs.

As noted above, Judson merely describes that informational messages are always displayed while the client is waiting for a reply, regardless of whether a sufficient delay occurs during the accessing of data. However, as admitted in the Office Action, Judson does not specifically disclose identifying when a sufficient delay occurs during the accessing step.

Moreover, with regard to the Office Action's assertion that Klug teaches determining the wait time associated with a particular web site access request and presenting wait time messages based on the wait time, Appellants' attorney notes that this assertion differs from Appellants' claim language, which recites "accessing data on a network from a client computer," "identifying when a sufficient delay occurs during the accessing step," and "presenting filler contents on the client computer during the identified sufficient delay."

Instead, as noted above, Klug always displays a message whenever a site request is made by a user. The above portions of Klug merely state that the length of the waiting time messages are selected on the basis of the anticipated (i.e., estimated) duration of the waiting time.

Consequently, the combination of Judson and Klug would always display a message whenever a site request is made by a user. Moreover, the combination of Judson and Klug merely means that the length of the waiting time messages are selected on the basis of the anticipated (i.e., estimated) duration of the waiting time.

Thus, the combination of Judson and Klug does not anticipate Appellants' invention. Moreover, the various elements of Appellants' claimed invention together provide operational advantages over the references. In addition, Appellants' invention solves problems not recognized by the references.

Appellants' attorney submits that independent claims 1, 15, and 27 are allowable over the references. Further, dependent claims 40-66 are submitted to be allowable over the references in the same manner, because they are dependent on independent claims 1, 15, and 27, respectively, and thus contain all the limitations of the independent claims.

In addition, at least some of the dependent claims 40-66 recite additional novel elements not shown by the references, as set forth below.

In this regard, Appellants' attorney notes that the Office Action misstates some of the claim groupings. Nonetheless, Appellants' attorney groups the claims correctly and cites the appropriate rejection from the Office Action against each group.

2. Claims 40, 49 and 58

With regard to dependent claims 40, 49 and 58, which recite that the identifying step or identification of the sufficient delay is performed by a server computer connected to the client

computer via the network, the Office Action asserts that these limitations are taught by Klug at col. 5, line 45 – col. 6, line 4. Appellants' attorney disagrees. At the indicated location, Klug merely describes downloading messages and logic from a server, but nowhere describes identifying the sufficient delay at the server computer.

3. Claims 41, 50 and 59

With regard to claims 41, 50 and 59, which recite that the sufficient delay is identified by the server computer and then communicated to the client computer to trigger the presenting of the filler contents on the client computer, the Office Action asserts that these limitations are taught by Klug at col. 2, line 63 – col. 3, line 59. Appellants' attorney disagrees. At the indicated location, Klug merely describes terminating playback of the message when a web page is ready for display.

4. Claims 42, 51 and 60

With regard to claims 42, 51 and 60, which recite that the filler contents are provided by the server computer, these claims stand or fall with independent claims 1, 15 and 27.

5. Claims 43, 52 and 61

With regard to claims 43, 52 and 61, which recite that the filler contents are selected by the server computer, these claims stand or fall with independent claims 1, 15 and 27.

6. Claims 44, 53 and 62

With regard to claims 44, 53 and 62, which recite that the filler contents are directly related to the accessed data (in claims 44 and 53) and that the filler contents are directly related to the user's transaction or session (in claim 62), these claims stand or fall with independent claims 1, 15 and 27.

7. Claims 45, 54 and 63

With regard to claims 45, 54 and 63, which recite that the presenting of the filler contents do not interrupt the accessing of the data, the Office Action asserts that these limitations are taught by Klug at col. 5, line 45 – col. 6, line 21. Appellants' attorney disagrees. At the indicated location, Klug merely describes that the downloading of message sets occurs prior to web site selection and

therefore user node resources remain available for use in loading selected web site information, but nowhere asserts that the presenting of the filler contents does not interrupt the accessing of the data.

8. Claims 46, 55 and 64

With regard to claims 46, 55 and 64, which recite that the filler contents are presented while the accessing of the data continues, these claims stand or fall with independent claims 1, 15 and 27.

9. Claims 47, 56 and 65

With regard to claims 47, 56 and 65, which recite that, if the presenting of the filler contents completes before the accessing of the data completes, new filler contents are presented, the Office Action asserts that these limitations are taught by Klug at col. 3, lines 40-59, col. 5, line 45 – col. 6, line 53 and col. 8, lines 6-52. Appellants' attorney disagrees. At the indicated locations, Klug merely describes selecting waiting time messages based on the anticipated duration of the waiting time, displaying or playing the messages, and the calculation of the waiting time, but nowhere asserts that new filler contents are presented if the presenting of the filler contents completes before the accessing of the data completes.

10. Claims 48, 57 and 66

With regard to claims 48, 57 and 66, which recite that, if the accessing of the data completes before the presenting of the filler contents completes, the presenting of the filler contents is terminated, these claims stand or fall with independent claims 1, 15 and 27.

VIII. CONCLUSION

In light of the above arguments, Appellants' attorney respectfully submits that the cited references do not anticipate nor render obvious the claimed invention. More specifically, Appellants' claims recite novel physical features which patentably distinguish over any and all references under 35 U.S.C. §§ 102 and 103. As a result, a decision by the Board of Patent Appeals and Interferences reversing the Examiner and directing allowance of the pending claims in the subject application is respectfully solicited.

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Appellants' attorney.

Respectfully submitted,

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GHG/

APPENDIX

1. A method of alleviating problems associated with delays in accessing data on a network, comprising:

- (a) accessing data on a network from a client computer;
- (b) identifying when a sufficient delay occurs during the accessing step; and
- (c) presenting filler contents on the client computer during the identified sufficient delay.

2-14. (CANCELED)

15. An apparatus for alleviating problems associated with delays in accessing data on a network, comprising:

- (a) a client computer connected to the network;
- (b) a browser, executed by the client computer, for accessing data on the network; and
- (c) a filler engine, executed by the client computer, for presenting filler contents on the client computer when a sufficient delay is identified in the accessing of the data on the network.

16-26. (CANCELED)

27. A computer program carrier readable by a computer and embodying one or more instructions that are executable by the computer to perform method steps for alleviating problems associated with delays in accessing data on a network, the method comprising:

- (a) accessing data on a network from a client computer;
- (b) identifying when a sufficient delay occurs during the accessing step; and
- (c) presenting filler contents on the client computer during the identified sufficient delay.

28-39. (CANCELED)

40. The method of claim 1 above, wherein the identifying step is performed by a server computer connected to the client computer via the network.

41. The method of claim 40 above, wherein the sufficient delay is identified by the server computer and then communicated to the client computer to trigger the presenting of the filler contents on the client computer.

42. The method of claim 40 above, wherein the filler contents are provided by the server computer.

43. The method of claim 40 above, wherein the filler contents are selected by the server computer.

44. The method of claim 40 above, wherein the filler contents are directly related to the accessed data.

45. The method of claim 40 above, wherein the presenting of the filler contents do not interrupt the accessing of the data.

46. The method of claim 40 above, wherein the filler contents are presented while the accessing of the data continues.

47. The method of claim 40 above, wherein, if the presenting of the filler contents completes before the accessing of the data completes, new filler contents are presented.

48. The method of claim 40 above, wherein, if the accessing of the data completes before the presenting of the filler contents completes, the presenting of the filler contents is terminated.

49. The apparatus of claim 15 above, wherein identification of the sufficient delay is performed by a server computer connected to the client computer via the network.

50. The apparatus of claim 49 above, wherein the sufficient delay is identified by the server computer and then communicated to the client computer to trigger the presenting of the filler contents on the client computer.

51. The apparatus of claim 49 above, wherein the filler contents are provided by the server computer.

52. The apparatus of claim 49 above, wherein the filler contents are selected by the server computer.

53. The apparatus of claim 49 above, wherein the filler contents are directly related to the accessed data.

54. The apparatus of claim 49 above, wherein the presenting of the filler contents do not interrupt the accessing of the data.

55. The apparatus of claim 49 above, wherein the filler contents are presented while the accessing of the data continues.

56. The apparatus of claim 49 above, wherein, if the presenting of the filler contents completes before the accessing of the data completes, new filler contents are presented.

57. The apparatus of claim 49 above, wherein, if the accessing of the data completes before the presenting of the filler contents completes, the presenting of the filler contents is terminated.

58. The computer program carrier of claim 27 above, wherein the identifying step is performed by a server computer connected to the client computer via the network.

59. The computer program carrier of claim 58 above, wherein the sufficient delay is identified by the server computer and then communicated to the client computer to trigger the presenting of the filler contents on the client computer.

60. The computer program carrier of claim 58 above, wherein the filler contents are provided by the server computer.

61. The computer program carrier of claim 58 above, wherein the filler contents are selected by the server computer.

62. The computer program carrier of claim 58 above, wherein the filler contents are directly related to the user's transaction or session.

63. The computer program carrier of claim 58 above, wherein the presenting of the filler contents do not interrupt the accessing of the data.

64. The computer program carrier of claim 58 above, wherein the filler contents are presented while the accessing of the data continues.

65. The computer program carrier of claim 58 above, wherein, if the presenting of the filler contents completes before the accessing of the data completes, new filler contents are presented.

66. The computer program carrier of claim 58 above, wherein, if the accessing of the data completes before the presenting of the filler contents completes, the presenting of the filler contents is terminated.